

RF EXPOSURE REPORT

CERTIFICATE OF CONFORMITY

FCC Rule Part: FCC Part 2 (Section 2.1091)

Report No.: MFBAPP-WTW-P25060159

FCC ID: UDX-600196027

Product: C8121-CW-G2, C8121-W-G2

Brand: Cisco

Model No.: C8121-CW-G2

Series Model.: C8121-W-G2

Received Date: 2025/6/3

Test Date: 2025/7/24 ~ 2025/9/25

Issued Date: 2025/11/21

Applicant: Cisco Systems, Inc.

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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FCC Registration / 788550 / TW0003

Designation Number:

Approved by:

Jeremy Lin

Jeremy Lin / Project Engineer

Date:

2025/11/21

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Prepared by : Lena Wang / Specialist

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Release Control Record

Issue No.	Description	Date Issued
MFBAPP-WTW-P25060159	Original release.	2025/11/21

1 Certificate

Product: C8121-CW-G2, C8121-W-G2

Brand: Cisco

Test Model: C8121-CW-G2

Series Model: C8121-W-G2

Sample Status: Engineering sample

Applicant: Cisco Systems, Inc.

Test Date: 2025/7/24 ~ 2025/9/25

FCC Rule Part: FCC Part 2 (Section 2.1091)

Standard: KDB 447498 D04 Interim General RF Exposure Guidance v01

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

2 Applicable RF Exposure Limit

§ 1.1310 Radiofrequency radiation exposure limits.

(a) Specific absorption rate (SAR) shall be used to evaluate the environmental impact of human exposure to radiofrequency (RF) radiation as specified in § 1.1307(b) of this part within the frequency range of 100 kHz to 6 GHz (inclusive).

(b) The SAR limits for occupational/controlled exposure are 0.4 W/kg, as averaged over the whole body, and a peak spatial-average SAR of 8 W/kg, averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the parts of the human body treated as extremities, such as hands, wrists, feet, ankles, and pinnae, where the peak spatial-average SAR limit for occupational/controlled exposure is 20 W/kg, averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube). Exposure may be averaged over a time period not to exceed 6 minutes to determine compliance with occupational/controlled SAR limits.

(c) The SAR limits for general population/uncontrolled exposure are 0.08 W/kg, as averaged over the whole body, and a peak spatial-average SAR of 1.6 W/kg, averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the parts of the human body treated as extremities, such as hands, wrists, feet, ankles, and pinnae, where the peak spatial-average SAR limit is 4 W/kg, averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube). Exposure may be averaged over a time period not to exceed 30 minutes to determine compliance with general population/uncontrolled SAR limits.

(e) Maximum Permissible Exposure (MPE) to radiofrequency electromagnetic fields

➤ Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
0.3-1.34	614	1.63	(100)*	<30
1.34-30	824/f	2.19/f	(180/f ²)*	<30
30-300	27.5	0.073	0.2	<30
300-1,500	...	...	f/1500	<30
1,500-100,000	...	...	1.0	<30

f = frequency in MHz. * = Plane-wave equivalent power density.

➤ Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
0.3-3.0	614	1.63	*(100)	≤6
3.0-30	1842/f	4.89/f	*(900/f ²)	<6
30-300	61.4	0.163	1.0	<6
300-1,500	...	...	f/300	<6
1,500-100,000	...	...	5	<6

f = frequency in MHz. * = Plane-wave equivalent power density.

MPE-based Exemption – §1.1307(b)(3)(i)(B)

- For mobile devices that are not exempt per Table 1 of §1.1307(b)(1)(i)(C) and device at distances from 20 cm to 40 cm and in 0.3 GHz to 6 GHz. The MPE-based test exemption condition is in terms of ERP, defined as the product of the maximum antenna gain and the delivered maximum time-averaged power.

$$P_{th} \text{ (mW)} = ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases}$$

Fixed RF sources operating in the same time-averaging period – §1.1307(b)(3)(ii)(B)

- Either SAR-based or MPE-based exemption may be considered for test exemption for fixed, mobile, or portable device exposure conditions; therefore, the contributions from each exemption in conjunction with the measured SAR (Evaluated_k term) should be used to determine exemption for simultaneous transmission according to Formula below,

$$\sum_{i=1}^a \frac{P_i}{P_{th,i}} + \sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^c \frac{Evaluated_k}{Exposure Limit_k} \leq 1$$

The sum of the ratios of the applicable terms for SAR-based, MPE-based and measured SAR or MPE should be less than 1, to determine simultaneous transmission exposure compliance.

Where:

a = number of fixed, mobile, or portable RF sources claiming exemption using [paragraph \(b\)\(3\)\(i\)\(B\)](#) of this section for P_{th} , including existing exempt transmitters and those being added.

c = number of existing fixed, mobile, or portable RF sources with known evaluation for the specified minimum distance including existing evaluated transmitters.

$P_{th,i}$ = the exemption threshold power (P_{th}) according to [paragraph \(b\)\(3\)\(i\)\(B\)](#) of this section for fixed, mobile, or portable RF source i .

$ERP_{th,j}$ = exemption threshold ERP for fixed, mobile, or portable RF source j , at a distance of at least $\lambda/2\pi$ according to the applicable formula of [paragraph \(b\)\(3\)\(i\)\(C\)](#) of this section.

$Exposure Limit_k$ = either the general population/uncontrolled maximum permissible exposure (MPE) or specific absorption rate (SAR) limit for each fixed, mobile, or portable RF source k , as applicable from [§ 1.1310 of this chapter](#).

b = number of fixed, mobile, or portable RF sources claiming exemption using [paragraph \(b\)\(3\)\(i\)\(C\)](#) of this section for Threshold ERP, including existing exempt transmitters and those being added.

P_i = the available maximum time-averaged power or the ERP, whichever is greater, for fixed, mobile, or portable RF source i at a distance between 0.5 cm and 40 cm (inclusive).

ERP_j = the ERP of fixed, mobile, or portable RF source j .

$Evaluated_k$ = the maximum reported SAR or MPE of fixed, mobile, or portable RF source k either in the device or at the transmitter site from an existing evaluation at the location of exposure.

3 Test Results

Environmental Conditions:	25°C, 60% RH	Tested By:	Kevin Kuo
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For Single RF Source

MPE-based Exemption §1.1307(b)(3)(i)(B)							
Operation Mode	Frequency Band (MHz)	Average Power (mW)	Antenna Gain (dBi)	Maximum ERP (mW)	Distance (cm)	Limit Threshold (mW)	Test Result
WLAN 2.4 GHz	2412-2462	432.734	3.31	565.225	20	3060	Pass
WLAN 5 GHz	5180-5320 5500-5825	461.526	5.97	1112.234	20	3060	Pass
WLAN 5.9 GHz	5815-5885	442.883	5.26	906.336	20	3060	Pass

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

LTE

MPE-based Exemption §1.1307(b)(3)(i)(B)					
Operation Mode	Frequency Band (MHz)	Maximum ERP (mW)	Distance (cm)	Limit Threshold (mW)	Test Result
LTE Band 2	1850-1910	966.05	20	3060	Pass
LTE Band 4	1710-1755	484.17	20	3060	Pass
LTE Band 5	824-849	1216.19	20	1680.96	Pass
LTE Band 7	2500-2570	543.25	20	3060	Pass
LTE Band 12	699-716	966.05	20	1425.96	Pass
LTE Band 13	777-787	1216.19	20	1585.08	Pass
LTE Band 14	788-798	1083.93	20	1607.52	Pass
LTE Band 17	704-716	1364.58	20	1436.16	Pass
LTE Band 25	1850-1915	860.99	20	3060	Pass
LTE Band 26	814-849	1083.93	20	1660.56	Pass
LTE Band 41 PC3	2496-2690	543.25	20	3060	Pass
LTE Band 41 PC2	2496-2690	860.99	20	3060	Pass
LTE Band 42 PC3	3450-3550	384.59	20	3060	Pass
LTE Band 42 PC2	3450-3550	609.54	20	3060	Pass
LTE Band 48	3550-3700	251.19	20	3060	Pass
LTE Band 66	1710-1780	484.17	20	3060	Pass
LTE Band 71	663-698	860.99	20	1352.52	Pass

Note:

1. Due to device will contains WWAN module ID, the WWAN EIRP/ERP refer to Sporton RF test report no.: FA2D2006 (Contains FCCC ID: N7NEM92).
2. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

5GNR

MPE-based Exemption §1.1307(b)(3)(i)(B)					
Operation Mode	Frequency Band (MHz)	Maximum ERP (mW)	Distance (cm)	Limit Threshold (mW)	Test Result
NR Band 2	1850-1910	1216.19	20	3060	Pass
NR Band 5	824-849	1531.09	20	1680.96	Pass
NR Band 7	2500-2570	767.36	20	3060	Pass
NR Band 12	699-716	1364.58	20	1425.96	Pass
NR Band 13	777-787	1531.09	20	1585.08	Pass
NR Band 14	788-798	1531.09	20	1607.52	Pass
NR Band 25	1850-1915	1216.19	20	3060	Pass
NR Band 26	814-849	1531.09	20	1660.56	Pass
NR Band 30	2305-2315	354.81	20	3060	Pass
NR Band 41 PC3	2496-2690	767.36	20	3060	Pass
NR Band 41 PC2	2496-2690	1216.19	20	3060	Pass
NR Band 48	3550-3700	354.81	20	3060	Pass
NR Band 66	1710-1780	609.54	20	3060	Pass
NR Band 70	1695-1710	609.54	20	3060	Pass
NR Band 71	663-698	1216.19	20	1352.52	Pass
NR Band 77 PC3	3450-3550	384.59	20	3060	Pass
NR Band 77 PC2	3450-3550	609.54	20	3060	Pass
NR Band 77 PC3	3700-3980	384.59	20	3060	Pass
NR Band 77 PC2	3700-3980	609.54	20	3060	Pass
NR Band 78 PC3	3450-3550	384.59	20	3060	Pass

Note:

1. Due to device will contains WWAN module ID, the WWAN EIRP/ERP refer to Sporton RF test report no.: FA2D2006 (Contains FCCC ID: N7NEM92).
2. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

For Multiple RF Sources (Simultaneous Operations)

Multiple RF Sources (Simultaneous Operations)							
Exemption Evaluation					Sum of Ratios	Limit of Ratios	Test Result
Operation Mode	Frequency Band (MHz)	Maximum ERP (mW)	Limit Threshold (mW)	Ratio			
WLAN 2.4 GHz	2412-2462	565.225	3060	0.185			
WLAN 5 GHz	5180-5320 5500-5825	1112.234	3060	0.363	0.61	1	Pass
Routine Evaluation (General Population)							
Operation Mode	Operation Mode	Power Density (mW/cm²)	Limit (mW/cm²)	Ratio			
NR Band 5	824-849	0.034	0.549	0.062			

4 Conclusion

Source-base time average power is below Exemption Criteria and/or Routine Evaluation MPE thresholds, therefore the device is compliant FCC RF exposure requirement.

5 Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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The address and road map of all our labs can be found in our web site also.

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